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Global Crop Yield Convergence: How Russian Crop Yields Compare to Other Regions

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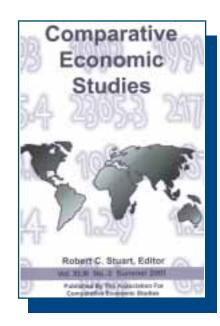
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In the past, Russia was a

major player in global food markets, but it has declined in importance in recent years. This article explores the impact that the reform era has had on crop yields in Russia and other New Independent States (NIS) of the



former Soviet Union. Six crops important to Russia and the NIS were examined: wheat, corn, rye, potatoes, sugar beets, and sunflowers. Before the breakup of the Soviet Union, yields for these crops generally were converging to the levels of countries that were global yield leaders. Afterwards, crop yields declined, leading to gaps between Russia and the global yield leaders that were wider than in the early 1960s. The authors used formal economic models to test convergence of crop yields in Russia and the NIS with the global yield leaders and other country subgroups. The results showed that wheat was the only crop to experience yield convergence globally for the entire period. For other commodities, yield patterns between Russia/NIS and other countries were not discernibly similar in formal co-integration analysis.

Overall, these findings are consistent with recent studies showing declining efficiency in Russia and the NIS in the reform era. Input price liberalization and institutional constraints have exerted downward pressure on yields, offsetting gains achieved by opening up to the global market. The results can be explained partly by an over reliance of fertilizers, rather than improvements in the R&D and extension system inherited from the Soviet Union.